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* APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,063	09/25/2003	Edmund J. Ring	58782US002	5853

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EXAMINER

HOANG, TU BA

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/671,063

Applicant(s)

RING, EDMUND J.

Examiner

Tu Ba Hoang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,6-10,14,16,20 and 21 is/are allowed.
- 6) ☒ Claim(s) 2-5,11-13,15,17-19 and 22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/29/03</u> . | 6) <input type="checkbox"/> Other: ____. |

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-5, 11-13, 15, 17-19, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, there is insufficient antecedent basis for "the DC voltage pulses" recited at line 2 in the claim or from the preceding claim.

In claim 11, the phrase "voltagepulse" recited at line 4 should be read as "voltage pulse" for keeping the consistency and avoiding confusion.

In claim 15, there is insufficient antecedent basis for "the control voltage" recited at line 2 in the claim or from the preceding claim 14. The term "IGBT" recited at line 2 should also be spelled out.

In claim 17, there are also insufficient antecedent bases for "the first series" recited at line 7 and "the last series" recited at line 8 in the claim or from the preceding claim.

In claim 19, the term "Schmitt Trigger" recited at line 2, followed the recitation of the inverting CMOS should be deleted or simply replaced by the word "trigger" because "Schmitt Trigger" is perhaps a tradename or trademark (as being capitalized) to be recited in the claim would renders the claim indefinite.

In claim 22, there is insufficient antecedent basis for "the resonant heating circuit" recited at lines 3-4 in the claim or from the preceding claim 14. It is also noted that the phrase "to configured" (i.e., second occurrence of the term "configured") should be deleted as being typing error.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Estes (US 4,358,654). Estes shows a static power switching system (Figures 1 and 7) for induction heating comprises a power switch 18 for providing a DC voltage pulse across a resonant heating circuit 14 and a switch control circuit 20 for generating with the resonant heating circuit 14 an oscillating voltage in response to the DC voltage pulse (column 3, line 57) and applying a DC voltage to the resonant heating circuit 14 upon detecting a substantially zero voltage across the power switch during a cycle of the oscillating voltage (see Figures 3-6 and column 3, lines 36-59).

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not show or suggest the use of a pulse initiator coupled across the power switch, for monitoring the oscillating voltage across the switch and initiating application of a DC voltage pulse to the resonant heating circuit upon

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detecting a substantially zero voltage across the power switch during a cycle of the oscillating voltage as recited in claim 1, or for monitoring an oscillating voltage across the power switch and providing a control signal to a pulse controller to close the power switch when the oscillating voltage reaches a predetermined threshold value and as the switch closes the voltage across the switch is substantially equal to zero in the manner recited in claim 14.

Claims 1, 6-10, 14, 16, and 20-21 are allowed.

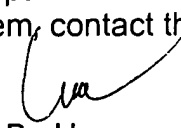
Claims 2-5, 15, 17-19, and 22 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Pritchett (US 3,745,378), Okuda (US 4,617,442), Aoki (US 4,931,609), Chang et al (US 6,016,257), and Ulrich (US 6,124,581).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Ba Hoang whose telephone number is (571) 272-4780. The examiner can normally be reached on Mon-fri from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu Ba Hoang
Primary Examiner
Art Unit 3742

December 06, 2004